

Japanese Knotweed



Background, Life History

Japanese knotweed (*Fallopia japonica*) is an herbaceous perennial from Asia. It was first introduced from Japan to the United Kingdom as an ornamental plant in 1825. Knotweed was then brought to North America in the late 1800s for use in landscaping and erosion control. Due to its aggressive nature, many states now prohibit its use.

Japanese knotweed is typically found in wet soils in lowlands, wetlands and plant communities along streams. It tolerates a wide range of growing conditions, including full sun, high salinity and dry soil. Now scattered throughout Missouri, Japanese knotweed grows along rivers, streams, roadsides, utility rights-of-way and crop fields.

Japanese knotweed grows 3 to 12 feet tall and has a shrublike appearance. Reddish, hollow and jointed stems become woody and rigid with age and resemble bamboo. Sheathlike coverings and swollen nodes are found along the stem where the leaves join. Alternate leaves are broadly heart-shaped with distinctly pointed tips and range from 3 to 6 inches in length. White-to-greenish flowers are terminal and produced in clusters along the stem. Flowering occurs in mid to late summer, yielding small, winged seeds by August and September.

Japanese knotweed spreads primarily by vegetative means with its vigorously growing rhizomes, which are very durable and survive for decades. A small piece of rhizome moved to another site will give rise to a new plant, as often happens on eroding stream banks. Colonizing along streams by seeds as well, knotweed will ultimately dominate the streamside habitat. Knotweed also spreads along roads during routine mowing and is often transported to new sites in fill dirt.

Impacts

Japanese knotweed grows quickly to form dense thickets that exclude native ground flora and prevents native trees and shrubs from establishing. Knotweed poses a significant threat to streamside areas, where it can survive severe floods and rapidly colonize scoured shores and islands. The coarse rhizomes do not stabilize the banks as well as the finer roots of trees or grasses, making the stream banks more prone to erosion.



James H. Miller, USDA Forest Service, Bugwood.org



Jenn Griseer, New York City Department of Environmental Protection, Bugwood.org

Erosion of stream banks dominated by Japanese knotweed. Rhizomes break off and colonize stream banks downstream.



Chris Evans, River to River CWMA, Bugwood.org

Clusters of white to greenish flowers occur midsummer.



Barbara Tokarska-Guzik, University of Silesia, Bugwood.org

Reddish, jointed stems and winged seeds help identify Japanese knotweed.

Control

Due to the substantial root system, manual control is not an effective treatment for Japanese knotweed. A foliar herbicide solution may be applied prior to seed formation in early summer and in the fall, often as a re-treatment. Effective herbicides include triclopyr, glyphosate, imazapyr and picloram used separately or in combination. Because knotweed thrives in streamside areas, herbicide choice should be based on location of plants and presence of nontarget vegetation. Triclopyr and picloram should not be used in wetlands or adjacent to water.

If foliar spray is not practical, cut individual stems 2 to 3 inches above the soil. Cutting will remove the above ground plant and stimulate the rhizomes below ground. Apply a 25 percent triclopyr or glyphosate herbicide solution to the cut stem immediately. Remove cut stems to aid in finding and treating re-sprouts. This will also cause more rapid re-vegetation. If needed, a 2 percent glyphosate foliar application may be used to control seedlings and re-sprouts in October or November when nontarget species are dormant.

A newer and very effective control method involves injecting a glyphosate solution into each stem using

specialized equipment. The glyphosate is absorbed into the rhizome with visible results in two weeks. Stem injection reduces effects on surrounding vegetation and may be used at any time during the growing season.

Multiple treatments within one growing season and in subsequent years will be needed for well-established populations regardless of control.

Identifying Japanese Knotweed

- large heart-shaped leaves, pointed at tip (3 to 6 inches)
- sheathlike coverings and swollen nodes are found where leaf meets the stem
- dense groups of reddish and hollow stems, 3 to 12 feet tall
- white-to-greenish flower clusters midsummer

Alternative Native Species

Ninebark (*Physocarpus opulifolius*)

For Additional Information

www.invasive.org/gist/moredocs/polssp01.pdf

www.invasivespeciesinfo.gov/plants/knotweed.shtml

www.fs.fed.us/database/feis/plants/forb/polssp/all.html

www.MissouriConservation.org

For more information or to report a population, contact your local Missouri Department of Conservation office, e-mail WildlifeDivision@mdc.mo.gov, or write:

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